Non Point Source Management Program :: Onsite Wastewater Systems

These are systems, such as septic tank systems, designed to treat wastewater from single or multi-family homes on the homeowner?s property. Most use soil absorption as part the treatment process. It is estimated that approximately 25 percent of homes nationally, and 50 percent of homes in North Carolina utilize onsite wastewater systems. Conventional septic systems are estimated to constitute 90 percent of all OSWS in North Carolina. Other systems in order of estimated use include innovative trench systems (9 percent) and pretreatment and alternative trench systems (1 percent).



Properly designed, installed and maintained septic systems have proven to be safe, efficient and economical. However, a poorly functioning system can release pathogens and nutrients into the environment that may create health and water quality problems. These pollutants may reach surface waters either through groundwater flow or overland if there is a surface failure. Localized problems from onsite wastewater systems can often be traced to insufficient depth to water table, hydraulic overloading, straight piping, infrequent septic pumping, improper septage disposal and high-density housing development. Nationally, over half of all septic tank systems are over thirty years old, and it is conservatively estimated that anywhere from 10 to 30 percent of onsite systems are failing annually.

Onsite Wastewater System Links

North Carolina State University

- Septic Systems and Their Maintenance
- Septic system web page with homeowner information and useful links

State Agencies

• NC Division of Environmental Health Onsite Wastewater Section website

Federal Agencies

- Environmental Protection Agency, Office of Water, Office of Wastewater Management Onsite/Decentralized Wastewater Systems
- NPS News-Notes, December 2000, #63- Special Focus: Onsite Wastewater Treatment
- National Small Flows Clearinghouse